Chapter 330 Design Documentation, Approval, and Process Review

330.01 General

The Project File (PF) contains the documentation for planning, scoping, programming, design, approvals, contract assembly, utility relocation, needed right of way, advertisement, award, construction, and maintenance review comments for a project. A Project File is completed for all projects and is retained by the region office responsible for the project. Responsibility for the project may pass from one office to another during the life of a project, and the Project File follows the project as it moves from office to office. Portions of the Project File that are not designated as components of the Design Documentation Package (DDP) may be purged when retention of the construction records is no longer necessary.

The Design Documentation Package is a part of the Project File. It documents and justifies design decisions and the design process that was followed. The Design Documentation Package is retained in a permanent, retrievable file for a period of 75 years, in accordance with Washington State Department of Transportation (WSDOT) records retention policy.

For operational changes and developer projects, design documentation is required and is retained by the region office responsible for the project, in accordance with WSDOT records retention policy. All participants in the design process must provide the appropriate documentation for their decisions.

330.02 References

Federal/state laws and codes:

Code of Federal Regulations (CFR) 23 CFR 635.111 "Tied bids"

23 CFR 635.411 "Material or product selection"

Revised Code of Washington (RCW) 47.28.030, Contracts – State forces – Monetary limits – Small businesses, minority, and women contractors – Rules

RCW 47.28.035, Cost of project, defined

Washington Federal-Aid Stewardship Agreement, as implemented in the design matrices (Chapter 325)

Design Guidance:

Advertisement and Award Manual, M 27-02, WSDOT

Directional Documents Index, WSDOT, at:

http://wwwi.wsdot.wa.gov/docs/

Executive Order E 1010.00, "Certification of Documents by Licensed Professionals," WSDOT

Hydraulics Manual, M 23-03, WSDOT

Master Plan for Limited Access Highways, WSDOT

Plans Preparation Manual, M 22-31, WSDOT

Roadside Classification Plan, M 25-31, WSDOT

Route Development Plan, WSDOT

Washington State Highway System Plan, WSDOT

Supporting Information:

A Policy on Geometric Design of Highways and Streets (Green Book), AASHTO, 2004

330.03 Definitions

Design Approval Documented approval of the design criteria, which becomes part of the Design Documentation Package. This approval is an endorsement of the design criteria by the designated representative of the approving organization, as shown in Figures 330-2a and 2b.

design exception (DE) Preauthorization to omit correction of an existing design element for various types of projects, as designated in the design matrices. (See Chapter 325.) A DE designation indicates that the design element is normally outside the scope of the project type. (See Figure 330-1.)

design variance A recorded decision to differ from the design level specified in the *Design Manual*, such as an Evaluate Upgrade (EU) not upgraded, a DE, or a deviation. EUs leading to an upgrade are documented but are not considered to be variances. A project or corridor analysis may also constitute a design variance if that analysis leads to a decision to use a design level or design classification that differs from what the *Design Manual* specifies for the project type.

Design Variance Inventory (DVI) A list of design elements that will not be improved in accordance with the *Design Manual* criteria designated for the project.

Design Variance Inventory System (DVIS) A database application developed to generate the DVI form. The DVIS also provides query functions, giving designers an opportunity to search for previously granted variances. The DVIS application can be accessed at:

http://www.wsdot.wa.gov/eesc/design/projectdev/

deviation A documented decision granting approval at project specific locations to differ from the design level specified in the *Design Manual*. (See Figures 325-3 through 7 and Figure 330-1.)

environmental documents:

- ***NEPA*** National Environmental Policy Act
- ***SEPA*** [Washington] State Environmental Policy Act
- ***CE*** NEPA: Categorical Exclusion
- ***CE*** SEPA: Categorical Exception
- ***EA*** Environmental Assessment
- ***ECS*** Environmental Classification Summary
- ***EIS*** Environmental Impact Statement
- ***ERS*** Environmental Review Summary
- ***FONSI*** Finding Of No Significant Impact
- ***ROD*** Record of Decision

evaluate upgrade (EU) A decision-making process to determine whether or not to correct an existing design element as designated in the design matrices. Documentation is required. (See Figure 330-1.)

FHWA Federal Highway Administration.

HQ The Washington State Department of Transportation Headquarters organization.

Project Control Form A form used to document and approve revisions to project scope, schedule, or budget, from a previously approved Project Definition (see Project Summary).

Project Development Approval Final approval of all project development documents by the designated representative of the approving organization prior to the advertisement of a capital transportation project. (See Figures 330-2a and 2b.)

Project File (PF) A file containing all documentation and data for all activities related to a project. (See 330.01 and 330.04.)

- ***Design Documentation Package (DDP)*** The portion of the Project File, including Project Development Approval, that will be retained long-term in accordance with WSDOT document retention policies. Depending on the scope of the project, it contains the Project Summary and some or all of the other documents discussed in this chapter. Common components are listed in Figure 330-5. Technical reports and calculations are part of the Project File, but are not designated as components of the DDP. Include estimates and justifications for decisions made in the DDP. (See 330.04(2).) The DDP explains how and why the design was chosen, and documents approvals. (See 330.01.)

Project Summary A set of electronic documents consisting of the Design Decisions Summary (DDS), the Environmental Review Summary (ERS), and the Project Definition (PD). The Project Summary is part of the design documentation required to obtain Design Approval and ultimately is part of the design documentation required for Project Development Approval. (See 330.06.)

- ***Design Decisions Summary (DDS)*** An electronic document that records major design decisions regarding roadway geometrics, roadway and roadside features, and other issues that influence the project scope and budget.
- ***Environmental Review Summary (ERS)*** An electronic document that records the environmental requirements and considerations for a specific project.
- ***Project Definition (PD)*** An electronic document that records the purpose and need of the project, along with program level and design constraints.

scoping phase The first phase of project development for a specific project. It follows identification of the need for a project and precedes detailed project design. It is the process of identifying the work to be done and developing a cost estimate for completing the design and construction. The Project Summary, engineering and construction estimates, and several technical reports (geotechnical, surfacing, bridge condition, etc.) are developed during this phase.

330.04 Design Documentation

(1) Purpose

Design documentation records the evaluations and decisions by the various disciplines that result in design recommendations. Design assumptions and decisions made prior to and during the scoping phase are included. Changes that occur throughout project development are documented. Required justifications and approvals are also included.

The DDP identifies the purpose and need of the project and documents how the project addresses the purpose and need. The "Project Design Documentation Check List" has been developed as a tool to assist

in generating the contents of the DDP and the PF. The use of this tool is optional and can be found at: http://www.wsdot.wa.gov/eesc/design/projectdev/

(2) Design Documents

The DDP portion of the PF preserves the decision documents generated during the design process. In each package, a summary (list) of the documents is recommended.

The design documents commonly included in the PF and DDP for all but the simplest projects are listed in Figure 330-5.

Documentation is not required for components not related to the project.

The DVI is *required* for all projects on the National Highway System (NHS) having design variances; it is recommended for all projects having design variances. The DVI lists all EU not upgraded to the applicable design level, DE, and deviations as indicated by the design matrices. Record variances resulting from a project or corridor analysis in the DVI. Use the DVIS database application to record and manage design variances. The DVIS is available at: http://www.wsdot.wa.gov/eesc/design/projectdev/

The ERS and the PD are required for most projects. Exceptions will be identified by the Project Control and Reporting Office.

The DDS is not required for the following project types unless they involve reconstructing the lanes, shoulders, or fill slopes. Since these and some other project types are not included in the design matrices, evaluate them with respect to modified design level (M) for non-NHS routes and full design level (F) for NHS routes. Include in the evaluation only those design elements specifically impacted by the project. Although the following list illustrates some of the project types that do not require a DDS, the list is not intended to be a complete accounting of all such projects. Consult with the HQ Project Control and Reporting Office for projects not included in the list.

- Bridge painting
- Crushing and stockpiling
- Pit site reclamation
- Lane marker replacement
- Guidepost replacement
- Signal rephasing
- Signal upgrade
- Seismic retrofit
- Bridge joint repair
- Navigation light replacement
- Signing upgrade
- Illumination upgrade
- Rumble strips
- Electrical upgrades
- Major drainage
- Bridge scour
- Fish passage
- Other projects as approved by the HQ Design Office

(3) Certification of Documents by Licensed Professionals

All original technical documents must bear the certification of the responsible licensee. (See Executive Order E 1010.00.)

(4) Design Exception (DE), Evaluate Upgrade (EU), and Deviation Documentation

In special cases, projects may need to address design elements, which are shown as blank cells in a design matrix. (See Figure 330-1.) These special cases must be coordinated with the appropriate Assistant State Design Engineer (ASDE) and the HQ Project Control and Reporting Office. When this is necessary, document the reasons for inclusion of that work in your project.

When the design matrices specify a DE for a design element, the DE documentation must specify the matrix and row, the design element, and the limits of the exception. When a DVI is required for the project, the DE locations must be recorded in the inventory.

The EU process determines if an item of work will or will not be done, through analysis of factors such as benefit/cost, route continuity, accident reduction potential, environmental impact, and economic development. Document all EU decisions to the DDP using the list in Figure 330-6 as a guide for the content. The cost of the improvement must always be considered when making EU decisions. EU examples on the Internet can serve as models for development of EU documentation. The appropriate approval authority for EUs is designated in Figures 330-2a and 2b.

Deviation requests are stand-alone documents requiring enough information and project description for an approving authority to make an informed decision of approval or denial. Documentation of a deviation must contain justification and must be approved at the appropriate administrative level, as shown in Figures 330-2a and 2b. Submit the request as early as possible because known deviations are to be approved prior to Project Development Approval or Intersection/Interchange Plan approval.

Matrix Cell Content	Project corrects design elements that do not conform to specified design level	Document to file[1]	Record in DVIS[2]
Blank cell in design matrix		No[3]	No
Cell Entry			
Full (F), Modified (M), or Basic (B) (with no DE or EU qualifiers)	Yes	No	No
	No[4]	Yes[5]	Yes
Design Exception (DE)	Yes[3]	DDP	No
	No	DDP	Yes
Evaluate Upgrade (EU)[5]	Yes	DDP	No
	No	DDP	Yes

DDP = Document to Design Documentation Package

Notes:
[1] See 330.04(3).
[2] See 330.04(2).
[3] Document to the DDP if the element is included in the project as identified in the Project Summary or Project Control Form.
[4] Nonconformance with specified design level (see Chapter 325) requires an approved deviation.
[5] Requires supporting justification. See 330.04(4).

Design Matrix Documentation Requirements
Figure 330- 1

When applying for deviation approval, it is necessary to provide two explanations. The first identifies the design element and explains why the design level specified in the design matrices was not or cannot be used. The second provides the justification for the design that is proposed. Justification for a deviation must be supported by at least two of the following:

- Accident history and accident analysis
- Benefit/cost analysis
- Engineering judgment
- Environmental issues
- Route continuity

Engineering judgment includes a reference to another publication, with an explanation of why that reference is applicable to the situation encountered on the project.

If the element you wish to deviate meets AASHTO's guidance such as *A Policy on Geometric Design of Highways and Streets* but not the *Design Manual* criteria, the only documentation and justification required to support the deviation request is:

- Identify the design element.
- Explain why the design level specified in the design matrices was not used.

- Explain which reference to the current publication of AASHTO's *A Policy on Geometric Design of Highways and Streets* was used (including chapter and page number of the policy).

Deviation approval is at the appropriate administrative level, as shown in Figures 330-2a and 2b.

Reference a corridor or project analysis as supporting justification for design deviations dealing with route continuity issues. (See Chapter 325.)

Once a deviation is approved, it applies to that project only. When a new project is programmed at the same location, the subject design element must be reevaluated and either (1) the subject design element is rebuilt to conform with the applicable design level, or (2) a new deviation is developed, approved, and preserved in the DDP for the new project. Check the DVIS for help in identifying previously granted deviations.

A change in a design level resulting from an approved *Route Development Plan* or a corridor or project analysis, as specified in design matrix notes, is documented similar to a deviation. Design elements that do not comply with the design level specified in an approved corridor or project analysis are documented as deviations.

To prepare a deviation request, use the list in Figure 330-7 as a general guide for the sequence of the content. The list is not all-inclusive of potential content and it might include suggested topics that do not apply to a particular project. Design deviation examples can be found at:
http://www.wsdot.wa.gov/eesc/design/projectdev/

330.05 Project Development

In general, the region initiates the development of a specific project by preparing the Project Summary. Some project types may be initiated by other WSDOT groups such as the HQ Bridge and Structures Office or the HQ Traffic Office, rather than the region. The project coordination with other disciplines (such as Real Estate Services, Roadside and Site Development, Utilities, and Environmental) is started in the project scoping phase and continues throughout the project's development. The region coordinates with state and federal resource agencies and local governments to provide and obtain information to assist in developing the project.

The project is developed in accordance with all applicable Directives, Instructional Letters, Supplements, and manuals; the *Master Plan for Limited Access Highways*; the *Washington State Highway System Plan;* the *Route Development Plan;* the Washington Federal-Aid Stewardship Agreement, as implemented in the design matrices (see Chapter 325); and the Project Summary.

The region develops and maintains documentation for each project. The Project File includes documentation of project work including planning; scoping; public involvement; environmental action; design decisions; right of way acquisition; Plans, Specifications, and Estimates (PS&E) development; project advertisement; and construction. Refer to the *Plans Preparation Manual* for PS&E documentation.

All projects involving FHWA action require NEPA clearance. Environmental action is determined through the ECS form. The environmental approval levels are shown in Figures 330-3a and 3b.

Upon receipt of the ECS approval for projects requiring an EA or EIS under NEPA, the region proceeds with environmental documentation, including public involvement, appropriate to the magnitude and type of the project. (See Chapter 210.)

Design approval and approval of Right of Way Plans are required prior to acquiring property. If federal funds are used to purchase the property then NEPA clearance is also required.

The ASDEs work with the regions on project development and conduct process reviews on projects as described in 330.10.

330.06 Scoping Phase

Development of the project scope is the initial phase of project development. This effort is prompted by the *Washington State Highway System Plan*. The project scoping phase consists of determining a project description, schedule, and cost estimate. The intent is to make design decisions early in the project development process that focus the scope of the project. During the project scoping phase, the Project Summary documents are produced.

(1) Project Summary.

Provides information on the results of the scoping phase; links the project to the *Washington State Highway System Plan* and the *Capital Improvement and Preservation Program* (CIPP); and documents the design decisions, the environmental classification, and agency coordination. The Project Summary is developed and approved before the project is funded for design and construction. The Project Summary consists of ERS, DDS, and PD documents, which are electronic forms. Specific online instructions for filling them out are contained in the Project Summary database.

(a) **Environmental Review Summary (ERS).** Lists the environmental permits and approvals that will be required, environmental classifications, and environmental considerations. This form lists requirements by environmental and permitting agencies. If there is a change in the PD or DDS, the information in the ERS must be reviewed and revised to match the rest of the Project Summary. The ERS is prepared during the scoping phase and is approved by the region. During final design and permitting, revisions may need to be made to the ERS and be reapproved by the region.

(b) **Design Decisions Summary (DDS).** Provides the design matrix used to develop the project, and the roadway geometrics, design deviations, EUs, other roadway features, roadside restoration, and any design decisions made during the scoping of a project. The information contained in this form is compiled from various databases of departmental information, field data collection, and evaluations made in development of the PD and the ERS. Design decisions may be revised throughout the project development process based on continuing evaluations.

The DDS is approved by the appropriate ASDE for new construction and reconstruction projects on the Interstate System before submittal to FHWA. (See 330.07.) The regional design authority approves the DDS for all other types of projects. To approve the Design Decisions Summary, the region must be confident that there will be no significant change in the PD or estimated cost. However, if there is a change to the PD or a significant change in the cost estimate, the DDS is to be revised or supplemented and reapproved. Significant cost changes require a Project Control Form to be submitted and approved by the appropriate designee.

(c) **Project Definition (PD).** Identifies the various disciplines and design elements that will be encountered in project development. The PD states the purpose and need for the project, the program categories, and the recommendations for project phasing. This information determines the level of documentation and evaluation that is needed for Project Development Approval. The PD is completed early in the scoping phase to provide a basis for full development of the ERS, DDS, schedule, and estimate. If circumstances necessitate a change to an approved PD, process a Project Control Form for approval by the appropriate designee, revise the original PD form, and obtain approval of the revisions.

330.07 FHWA Approval

For all NHS projects, the level of FHWA oversight varies according to the type of project, the agency doing the work, and the funding source, as shown in Figures 330-2a and 2b. Oversight and funding do not affect the level of design documentation required for a project.

An FHWA determination of engineering and operational acceptance is required for any new or revised access point (including interchanges, temporary access breaks, and locked gate access points) on the Interstate System, regardless of funding. (See Chapter 1425.)

Documents for projects requiring FHWA review, Design Approval, and Project Development Approval are submitted through the HQ Design Office. Include applicable project documents as specified in Figure 330-5.

330.08 Design Approval

When the Project Summary documents are complete, and the region is confident that the proposed design adequately addresses the purpose and need for the project, a Design Approval may be entered into the PF. Approval levels for design and PS&E documents are presented in Figures 330-2a through 330-4.

The following items must be provided for Design Approval:

- A one- or two-page reader-friendly memo that describes the project
- Project Summary documents
- Corridor or project analysis
- Design Criteria worksheets, which can be found at:
  http://www.wsdot.wa.gov/EESC/Design/projectdev/default.htm
- Design Variances Inventory (for known variances)
- Channelization plans, Intersection plans, or Interchange plans (if applicable)
- Alignment plans and profiles (if project significantly modifies either the existing vertical or horizontal alignment)
- Current cost estimate with a confidence level

330.09 Project Development Approval

When all project development documents are complete and approved, Project Development Approval is granted by the approval authority designated in Figures 330-2a and 2b. The Project Development Approval becomes part of the DDP. (See 330.04 and Figure 330-5 for design documents that may lead to Project Development Approval.) Figures 330-2a through 330-4 provide approval levels for project design and PS&E documents.

The following items must be approved prior to Project Development Approval:

- Required Environmental Documents
- Design Approval Documents (and any supplements)
- Design Variance Inventory (as required)
- Cost Estimate
- Stamped cover sheet (project description)

Review new design policy for projects to be advertised more than three years after Project Development Approval, redesign as appropriate, and update the DDP and the Project Development Approval to reflect the revisions. For an overview of design policy changes, consult the Detailed Chronology of Design Policy Changes Affecting Shelved Projects at:
http://www.wsdot.wa.gov/eesc/design/policy/designpolicy.htm

330.10 Process Review

The process review is done to provide reasonable assurance that projects are prepared in compliance with established policies and procedures and that adequate records exist to show compliance with state and federal requirements. Process reviews are conducted by WSDOT, FHWA, or a combination of both.

The design and PS&E process review is performed in each region at least once each year by the HQ Project Development Branch. The documents used in the review process are (1) the Design Documentation Check List, (2) the PS&E Review Check List, and (3) the PS&E Review Summary. These are generic forms used for all project reviews. Copies of these working documents are available for reference when assembling project documentation. The HQ Design Office, Project Development Branch, maintains current copies at:
http://www.wsdot.wa.gov/eesc/design/projectdev/

Each project selected for review is examined completely and systematically beginning with the scoping phase (including planning documents) and continuing through contract plans and, when available, construction records and change orders. Projects are normally selected after contract award. For projects having major traffic design elements, the HQ Maintenance and Operations Programs' Traffic Operations personnel are involved in the review. The WSDOT process reviews may be held in conjunction with FHWA process reviews.

The HQ Project Development Branch schedules the process review and coordinates it with the region and FHWA.

A process review follows this general agenda:

1. Review team meets with regional personnel to discuss the object of the review.
2. Review team reviews the design and PS&E documents, and the construction documents and change orders (if available) using the checklists.
3. Review team meets with regional personnel to ask questions and clarify issues of concern.
4. Review team meets with regional personnel to discuss findings.
5. Review team submits a draft report to the region for comments and input.
6. If the review of a project shows a serious discrepancy, the regional design authority is asked to report the steps that will be taken to correct the deficiency.
7. The process review summary forms are completed.
8. The summary forms and checklists are evaluated by the State Design Engineer.
9. The findings and recommendations of the State Design Engineer are forwarded to the regional design authority for action and/or information within 30 days of the review.

Project Design	FHWA Oversight Level	Deviation and Corridor/Project Approval[a][b]	EU Approval[b]	Design Approval and Project Development Approval
Interstate				
New/Reconstruction[c] • Federal funds • No federal funds	 (d) (e)	FHWA	Region	FHWA*
Intelligent Transportation Systems (ITS) over $1 million	(f)	HQ Design	Region	HQ Design
All Other[g] • Federal funds • State funds • Local agency funds	 (f) (f) (e)	HQ Design	Region	Region
National Highway System (NHS)				
Managed access highway outside incorporated cities and towns, or inside unincorporated cities and towns, or on a limited access highway	(f)	HQ Design	Region	Region
Managed access highway within incorporated cities and towns[h] • Inside curb or EPS[i] • Outside curb or EPS	 (f) (f)	 HQ Design HQ H&LP	 Region N/A	 Region City/Town

FHWA = Federal Highway Administration
HQ = WSDOT Headquarters
H&LP = WSDOT Highways and Local Programs Office
EPS = Edge of paved shoulder where curbs do not exist

Notes:

(a) These approval levels also apply to deviation processing for local agency work on a state highway.
(b) See 330.04(4).
(c) For definition, see Chapter 325.
(d) Requires FHWA review and approval (full oversight) of design and PS&E submitted by HQ Design Office.
(e) To determine the appropriate oversight level, FHWA reviews the Project Summary (or other programming document) submitted by HQ Design Office, or by WSDOT Highways and Local Programs through HQ Design Office.
(f) FHWA oversight is accomplished by process review. (See 330.10.)
(g) Reduction of through lane or shoulder widths (regardless of funding) requires FHWA review and approval of the proposal.
(h) Applies to the area within the incorporated limits of cities and towns.
(i) Includes raised medians.
* FHWA will accept design criteria prior to NEPA approval, but will not approve the design until NEPA is complete.

Design Approval Level
Figure 330-2a

Project Design	FHWA Oversight Level	Deviation and Corridor/Project Approval[a][b]	EU Approval[b]	Design Approval and Project Development Approval
Non-National Highway System (Non-NHS)				
Improvement project on managed access highway outside incorporated cities and towns, or within unincorporated cities and towns, or on a limited access highway (Matrix lines 5-8 through 5-26)	N/A	HQ Design	Region	Region
Improvement project on managed access highway within incorporated cities and towns[h] • Inside curb or EPS[i] • Outside curb or EPS (Matrix lines 5-8 through 5-26)	N/A N/A	HQ Design HQ H&LP	Region N/A	Region City/Town
Preservation project on managed access highway outside incorporated cities and towns, or within unincorporated cities and towns, or on a limited access highway[j] (Matrix lines 5-1 through 5-7)	N/A	Region[k]	Region	Region
Preservation project on managed access highway within incorporated cities and towns[h][j] • Inside curb or EPS[i] • Outside curb or EPS (Matrix lines 5-1 through 5-7)	N/A N/A	Region HQ H&LP	Region N/A	Region City/Town

FHWA = Federal Highway Administration
HQ = WSDOT Headquarters
H&LP = WSDOT Highways and Local Programs Office
EPS = Edge of paved shoulder where curbs do not exist

Notes:

(a) These approval levels also apply to deviation processing for local agency work on a state highway.
(b) See 330.04(4).
(h) Applies to the area within the incorporated limits of cities and towns.
(i) Includes raised medians.
(j) For Bridge Replacement projects in the preservation program, follow the approval level specified for improvement projects.
(k) For guidance on access deviations, see Chapters 1430 & 1435.

Design Approval Level
Figure 330-2b

Item	Approval Authority		
	Region	HQ	FHWA
Program Development			
Work Order Authorization		X	X[1]
Public Hearings			
Corridor Hearing Summary		X[2]	
Design Summary		X[3]	
Access Hearing Plan		X[4]	
Access Findings and Order		X[5]	
Environmental by Classification			
Summary (ECS) NEPA			X
Class I NEPA (EIS)		[7]	X
Class I SEPA (EIS)		X	
Class II NEPA – Programmatic Categorical Exclusion (CE)*	X		
Class II NEPA – Documented Categorical Exclusion (CE)	[6]		X
Class II SEPA – Categorical Exemption (CE)	X		
Class III NEPA – Environmental Assessment (EA)		[7]	X
SEPA Check List	X		
Design			
Design Deviations	[8]	[8]	[8]
Experimental Features		X	X[9]
Environmental Review Summary	X		
Final Design Decisions Summary	X	X[3]	
Final Project Definition		X[10]	
Interchange Justification Report		[7]	X
Non-Interstate Interchange Justification Report		X	
Interchange Plans	X[11]	X[9][11]	
Intersection Plans	X[11]	X[9][11]	
Right of Way Plans	[12]	X	
Monumentation Map	X		
Materials Source Report		X[13]	
Pavement Determination Report		X[13]	
Roundabout Geometric Design	X[11]	X[11]	
Design Approval	[8]	[8]	[8]
Project Development Approval	[8]	[8]	[8]

Approvals
Figure 330-3a

Item	Approval Authority		
	Region	HQ	FHWA
Design			
Resurfacing Report		X[13]	
Signal Permits	X[14]		
Geotechnical Report		X[13]	
Tied Bids	X[15]		X[9][15]
Bridge Design Plans (Bridge Layout)	X	X	
Hydraulic Report	X[16][17]	X[16][17]	
Preliminary Signalization Plans		X[6]	
Rest Area Plans		X	
Roadside Restoration Plans	X [18]	X[19]	
Structures Requiring TS&L's		X	X
Planting Plans	X[18]	X[19]	
Grading Plans	X[18]	X[19]	
Continuous Illumination – Main Line		X[20]	
Project Control Form	X [21]	X[21]	
Work Zone Traffic Management Plan / Traffic Control Plan	X [22]		

X Normal procedure * If on the preapproved list

Notes:
[1] Federal aid projects only.
[2] Environmental and Engineering Programs Director approval.
[3] State Design Engineer approval.
[4] Right of Way Plans Engineer approval.
[5] Refer to Chapter 210 for approval requirements.
[6] Final review & concurrence required at the region prior to submittal to approving authority.
[7] Final review & concurrence required at HQ prior to submittal to approving authority.
[8] Refer to Figures 330-2a & 2b for Design Approval and Project Development Approval levels.
[9] Applies to new/reconstruction projects on Interstate routes.
[10] HQ Project Control & Reporting approval.
[11] Include channelization details.
[12] Certified by the responsible professional licensee.
[13] Submit to HQ Materials Laboratory for review and approval.
[14] Approved by region's Administrator or Designee.
[15] See 23 CFR 635.111.
[16] For additional guidance, see the *Hydraulics Manual*, M 23-03.
[17] Region to submit Hydraulic Report. Refer to *Hydraulics Manual*.
[18] Applies only to regions with a Landscape Architect.
[19] Applies only to regions without a Landscape Architect.
[20] Approved by State Traffic Engineer.
[21] Consult HQ Project Control & Reporting for clarification on approval authority.
[22] Region Traffic Engineer.

Approvals
Figure 330-3b

Item	New/ Reconstruction (Interstate only)	NHS and Non-NHS
DBE/training goals* **	(a)	(a)
Right of way certification for federal aid projects	FHWA(b)	FHWA(b)
Right of way certification for state-funded projects	Region(b)	Region(b)
Railroad agreements	(c)	(c)
Work performed for public or private entities*	[1][2]	Region[1][2]
State force work*	FHWA[3](d)	Region[3](d)
Use of state-furnished stockpiled materials*	FHWA[4]	Region[4]
Stockpiling materials for future projects*	FHWA[4]	Region[4]
Work order authorization	[5](d)	[5](d)
Ultimate reclamation plan approval through DNR	Region	Region
Proprietary item use*	FHWA[4]	[4](c)
Mandatory material sources and/or waste sites*	FHWA[4]	Region[4]
Nonstandard bid item use*	Region	Region
Incentive provisions	FHWA	(e)
Nonstandard time for completion liquidated damages*	FHWA(e)	(e)
Interim liquidated damages*	(f)	(f)

Notes:
[1] This work requires a written agreement.
[2] Region approval subject to $250,000 limitation.
[3] Use of state forces is subject to $60,000 limitation and $100,000 in an emergency situation, as stipulated in RCWs 47.28.030 and 47.28.035.
[4] Applies only to federal aid projects; however, document for all projects.
[5] Prior FHWA funding approval required for federal aid projects.

Regional or Headquarters approval authority:
(a) Office of Equal Opportunity
(b) Real Estate Services Office
(c) Design Office
(d) Project Control & Reporting Office
(e) Construction Office
(f) Transportation Data Office

References:
**Plans Preparation Manual*
***Advertisement and Award Manual*

PS&E Process Approvals

Figure 330-4

Document (1)	Required for FHWA Oversight
Project Definition	X
Design Decisions Summary	X
Environmental Review Summary	X
Design Variance Inventory (and supporting information for DEs, EUs not upgraded, and deviations)(2)	X
Cost Estimate	X
SEPA & NEPA documentation	X
Design Clear Zone Inventory (see Chapter 700)	X
Interchange plans, profiles, roadway sections	X
Interchange Justification Report (if requesting new or revised access points)	X
Corridor or project analysis (see Chapter 325)	X
Traffic projections and analysis	
Accident analysis	
Right of way plans	
Work zone traffic control strategy	
Record of Survey or Monumentation Map	
Documentation of decisions to differ from WSDOT design guidance	
Documentation of decisions for project components for which there is no WSDOT design guidance	
Paths and Trails Calculations(3)	

Notes:
(1) See Design Documentation Checklist for a complete list
(2) Required for NHS highways; recommended for all highways.
(3) See *Plans Preparation Manual*.

Common Components of Design Documentation Package
Figure 330-5

1. **Design Element Upgraded to the level indicated in the matrix**

   (a) Design element information
   - Design element
   - Location
   - matrix number and row

   (b) Cost estimate(1)

   (c) B/C ratio(2)

   (d) Summary of the justification for the upgrade(3)

2. **Design Element Not Upgraded to the level indicated in the matrix**

   (a) Design element information
   - Design element
   - Location
   - matrix number and row

   (b) Existing Conditions
   - Description
   - Accident Summary
   - Advantages and disadvantages of leaving the existing condition unchanged

   (c) Design Using the *Design Manual* criteria
   - Description
   - Cost estimate(1)
   - B/C ratio(2)
   - Advantages and disadvantages of upgrading to the level indicated in the matrix

   (d) Selected Design, if different from existing but less than the level indicated in the matrix
   - Description
   - Cost estimate(1)
   - B/C ratio(2)
   - Advantages and disadvantages of the selected design

   (e) Summary of the justification for the selected design(3)

Notes:

(1) An estimate of the approximate total additional cost for the proposed design. Estimate may be based on experience and engineering judgment.

(2) Include only when B/C is part of the justification. An approximate value based on engineering judgment may be used.

(3) A brief (one or two sentence) explanation of why the proposed design was selected.

Evaluate Upgrade (EU) Documentation Content List

Figure 330-6

1. **Overview**
   (a) The safety or improvement need that the project is to meet
   (b) Description of the project as a whole
   (c) Highway classification and applicable design matrix number and row
   (d) Funding sources
   (e) Evidence of deviations approved for previous projects (same location)

2. **Design Alternatives in Question**
   (a) Existing Conditions and Design Data
   - Location in question
   - Rural, urban, or developing
   - Route development plan
   - Environmental issues
   - Right of way issues
   - Number of lanes and existing geometrics
   - Present and 20-year projected ADT
   - Design speed, posted speed, and operating speed
   - Percentage of trucks
   - Terrain Designation
   - Managed Access or Limited Access

   (b) Accident Summary and Analysis
   (c) Design Using the *Design Manual* criteria
   - Description
   - Cost estimate
   - B/C ratio
   - Advantages and disadvantages
   - Reasons for considering other designs

   (d) Other Alternatives (may include “No-build” alternative)
   - Description
   - Cost estimate
   - B/C ratio
   - Advantages and disadvantages
   - Reasons for rejection

   (e) Selected Design Requiring Justification or Documentation to File
   - Description
   - Cost estimate
   - B/C ratio
   - Advantages and disadvantages

3. **Concurrences, Approvals, and Professional Seals**

Deviation Request Content List
Figure 330-7